

WHAT IS CLAIMED IS:

1. A method for detecting antithrombin III (AT) in a sample that may contain an interfering factor, the method comprising:
 - (a) contacting the sample with a first reagent R1 comprising an AT binding partner under conditions wherein the AT binding partner essentially does not interact with AT but interacts with the interfering factor,
 - (b) adding a second reagent R2 for a first determination of the free fraction of the AT binding partner,
 - (c) adding a third reagent R3 to change the conditions such that the AT binding partner interacts with AT and conducting a second determination of the free fraction of the AT binding partner, and
 - (d) determining the AT content in the sample from the difference between the first and second determinations of the free fraction of the AT binding partner.
2. The method of claim 1 wherein the AT binding partner is thrombin.
3. The method of claim 1 wherein the AT binding partner is factor Xa.
4. The method of claim 1 wherein the second reagent R2 comprises a chromogenic substrate.
5. The method of claim 1 wherein the second reagent R2 contains an antibody for determining the free AT binding partner.
6. The method of claim 1 wherein the third reagent R3 contains an accelerator of the interaction between AT and the AT binding partner.
7. The method of claim 6 wherein the accelerator is heparin.

8. The method of claim 1 wherein the first reagent R1 further comprises an antagonist for an accelerator of the interaction between AT and the AT binding partner.
9. The method of claim 8 wherein the first reagent R1 comprises polybren.
10. The method of claim 1 wherein the third reagent R3 further comprises an additional AT binding partner.
11. The method of claim 1 wherein the determination of the AT binding partner comprises a kinetic determination.
12. A method for the detection of antithrombin III (AT) in a sample comprising determining the interaction of an AT binding partner with AT present in the sample, wherein a first determination of the AT binding partner is conducted without AT interaction and subsequently a second determination of the AT binding partner is conducted with AT interaction and the AT content of the sample is determined from the difference between the first and second determinations.
13. A reagent kit for the quantitative detection of antithrombin (AT) in a sample comprising:
 - (a) a first reagent R1 comprising an AT binding partner,
 - (b) a second reagent R2 for determining the free AT binding partner, and
 - (c) a third reagent R3 comprising an accelerator for the interaction between AT and the AT binding partner where the third reagent R3 is separate from the first reagent R1.
14. The kit of claim 13 wherein the second reagent R2 is suitable for a chromogenic determination of the AT binding partner.
15. The kit of claim 13 wherein the second reagent R2 is suitable for an immunological determination of the AT binding partner.